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**ETCHING METHOD FOR INSULATING FILM AND FORMATION
METHOD FOR WIRING LAYER**

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Abstract

PROBLEM TO BE SOLVED: To provide a method in which an insulating film including an organic dielectric film is etched and worked quickly without forming a damage layer and without lowering a throughput.

SOLUTION: An insulating film 14 which contains an organic dielectric film such as a laminated film by an organic dielectric film 12 such as a polyallylether film or the like and by a silicon oxide-based dielectric film is formed on a substrate 10. A mask layer R is patterned and formed on the upper layer of the insulating film. Then, when the organic dielectric film part 12 is etched and worked, it is etched by making use of the mask layer as an etching mask by using ions or radicals which contain an NH group and which are generated by a gas discharge in a mixed gas of hydrogen gas and nitrogen gas or in a mixed gas of ammonia gas. While a reaction product containing a CN group is produced, the insulating film 14 (12) is etched, and an opening or the like is formed.

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